REMARKS

Claims 1, 3-16, 18-30 and 32-42 are pending in the present application and stand rejected. The Examiner's reconsideration of the claim rejections is respectfully requested in view of the following remarks.

Drawing Objection

The drawing amendment filed August 9, 2004 stands objected. The Examiner contends that new matter has been added. Applicants respectfully disagree. The profiler matrix controller 102 of Figure 1 shows an event identifier EID with a "Profile Data in" and a "Profile Data out." The drawings as filed contained a minor editorial error in which the illustrated arrows entered both the "Profile Data in" and the "Profile Data out" portions of the EID. To correct this inconsistency, the arrow going into "Profile Data out" was corrected in the drawing amendment of August 9, 2004 so that the arrow naturally flows "outward" as the term "Profile Data out" would suggest. As such, it is respectfully resubmitted that no matter has been added. Withdrawal of the drawing objection under 35 U.S.C. § 132 is respectfully requested.

Rejections under 35 U.S.C. § 103

The Office Action rejects the pending claims as follows:

(1) Claims 1, 4-8, 11-13, 16, 22, 38 are rejected as being unpatentable over Krishnaswamy et al. (U.S. Patent No. 6.622,300) (hereinafter "Krishnaswamy").

(2) Claims 3, 9-10, 23-30, 32-34, 37 and 39 are rejected as being unpatentable over Krishnaswamy in view of "Dictionary of Computing" (hereinafter "Dictionary")

(3) Claims 35-36 are rejected as being unpatentable over Krishnaswamy in view of Dictionary and further in view of Record et al. (U.S. Patent No. 5,355,484) (hereinafter "Record").

(4) Claims 18-19 are rejected as being unpatentable over Krishnaswamy in view of Altman et al. "DAISY: Dynamic Compilation for 100% Architectural Compatibility" (hereinafter "Altman")

(5) Claims 20-21 are rejected as being unpatentable over Krishnaswamy in view of Altman and further in view of Chang et al. "Using Profile Information to Assist Classic Code Optimizations" (hereinafter "Chang")

(6) Claims 40 and 42 are rejected as being unpatentable over Krishnaswamy in view Keller et al. (U.S. Patent No. 5,355,487) (hereinafter "Keller") and further in view of Chang.

(7) Claim 41 is rejected as being unpatentable over Krishnaswamy in view Keller, in view Chang and further in view of Altman.

The claim rejections are respectfully traversed. Applicants fully maintain the arguments presented in their response to paper no. 12, and present the following additional considerations.

We first address the logic surrounding the Examiner's rejection to claim 1. Applicants fully addressed the Examiner's arguments with regards to claim 1 in Applicants' response to paper no. 12. In response to the Applicants' original arguments, the Examiner further argues that col. 1, lines 37-43 of Krishnaswamy "clearly demonstrated a plurality of events." The recited portion of Krishnaswamy describes

feeding back profile information about the performance of computer code to a compiler. The compiler then recompiles the computer code using the profile information to optimize performance. Applicants assume that the Examiner means that the "profile information" described in Krishnaswamy teaches "a plurality of events," as claimed in claim 1. For the sake of argument, we will assume this to be true.

The Examiner then argues that col. 6, lines 24-28 of Krisnaswamy "disclosed selecting a plurality of events." Assuming that "profile information" of Krishnaswamy teaches "a plurality events," it would follow that col. 6, lines 24-28 of Krishnaswamy *should* teach some sort of selection from the profile information. However, this is clearly not the case. The recited portion of Krishnaswamy simply teaches that a PMU includes multiple counters *programmable to count events*. It is entirely unclear to Applicants how a PMU having multiple counters programming to count events is even *remotely* related to "selecting at least one of a plurality of events for profiling," as claimed in claim 1.

The Examiner's logic seems to be as follows: if there is a system that (1) collects profile information, and (2) contains counters for counting events, then it automatically follows that (3) events must be *selected* for profiling. Nothing in the recited portions of Krishnaswamy teaches or suggests such an inference. The Examiner seems to be inferring something that clearly is *not* in the claims. Such a logical jump without any support or consideration is simply insufficient for establishing *prima facie* obviousness. It is respectfully reminded that each *and* every claim limitation must be addressed – not just simply glossed over as an inference.

The Examiner also presents an inherency argument: "the controller is inherent to the fact that the PMU element is programmable." The Examiner's argument does not

address each *and* every limitation of claim 23: "a controller adapted to *select* the events for profiling and to *update* the profile counts of the selected events stored in said memory array." Further, even assuming, *arguendo*, that the PMU is programmable, it does not *necessarily* follow that the PMU unit *must* have circuitry for performing the function as claimed in claim 23. At best, the Examiner's argument is an unsubstantiated, conclusory statement.

The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993)(reversed rejection because inherency was based on what would result due to optimization of conditions, not what was necessarily present in the prior art); *In re Oelrich*, 666 F.2d 578, 581-82, 212 USPQ 323, 326 (CCPA 1981). "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990).

Applicants respectfully reassert that the motivation to combine references argued by the Examiner is a *textbook* example of attempting to combine references using hindsight reasoning. The Examiner argues that the definition of scaling in the Dictionary, which generically states: "adjustment of values to be used in a computation so that they and their resulting values are within the range that can be handled by the process or equipment" provides proper motivation for combining the Dictionary with Krishnaswamy in the manner suggested by the Examiner. This argument is problematic. The Examiner's

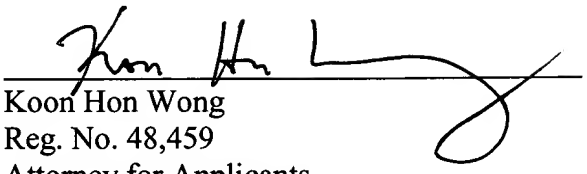
citation is to a generic statement, which does not specifically mention the teachings of Krishnaswamy. The Examiner seems to be using the benefit of hindsight reasoning to combine the references in a specific way to meet the Examiner's needs. This is entirely improper as the Examiner still does not expressly establish that the specific combination was known at the time of the prior art. The Examiner is, at best, making an educated *guess* as to what was known.

With regard to claim 40, the Examiner still has not addressed each and every limitation of the claim. For example, the Examiner does not address "if at least one of the selected event-specific profile counts has exceeded a predefined threshold, optimizing the portions of the computer program associated with the event-specific profile counts more aggressively than other portions of the computer program," as claimed in claim 40.

Thus, it is respectfully submitted that the pending claims are patentably distinguishable and nonobvious over the recited prior art. Withdrawal of the claim rejections under 35 U.S.C. §103(a) is respectfully requested.

In view of the foregoing remarks, it is respectfully submitted that all the claims now pending in the application are in condition for allowance. Early and favorable reconsideration is respectfully requested.

Respectfully submitted,

By: 

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